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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WHATLEY, KATELYN	
ART UNIT	PAPER NUMBER
1714	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/555,445	LEE ET AL.	
	Examiner	Art Unit	
	KATELYN B. WHATLEY	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,19,20,22-28,30 and 31* is/are pending in the application.

4a) Of the above claim(s) *1-9 and 23-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-16,19,20,22,30 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16, 19, 20, 22-28, 30 and 31 are currently pending.

2. Claims 1-9 and 23-28 have been withdrawn from consideration.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/13/2011 has been entered.

Claim Objections

4. Claim 10 is objected to because of the following informalities: The step of supplying the steam recites the limitation of ‘for washing laundry without washing water’ however this statement is contradictory since the steam is water in the gas phase and the steam is being used to wash the laundry. Furthermore, it is unclear as to how the laundry is soaked without the presence of water in the liquid form.

5. Claim 14 is objected to because of the following informalities: Claim 14 recites 'rotating the drum alternately at a lower speed than the rotation speed for separation contaminants to discharge steam in the drum'. It appears that this has been a grammatical error and the statement should read ‘rotation speed for separating contaminants’. Appropriate correction is required.

6. Claim 30 is objected to because of the following informalities: Line 5 of claim 30 recites 'performing at least one and more rinsing cycle'. It appears that this is a typographical error of 'performing at least one or more rinsing cycles'. Appropriate correction is required.

7. Claim 30 is objected to because of the following informalities: The claim is not clear as to when the washing water is supplied relative to the steam being supplied in the method. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 11 recites the limitation "higher than the temperature at which the laundry is sterilized" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim. The term "sterilized" is not presented in claim 10 and therefore it is not clear as to what the step in which the laundry is sterilized or how the laundry is sterilized. The metes and bound of the recitation of "sterilized" are not readily ascertainable.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 10, 11, 13-16, 19, 22, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPGPub 20050132503 to YANG ET AL.

15. With regard to claim 10, YANG teaches a method of operating a laundry device (paragraph 0010) comprising generating steam from water (0012 and 0013), supplying the steam to an inside of a drum where laundry is contained (0012 and 0013), stopping the supply of steam after a predetermined period of time (0036 and 0037), and rotating the drum at a high speed (0012 and 0013).

16. YANG does not explicitly state that the seam is supplied to soak the laundry and contaminants of the laundry. However, YANG teaches that it is desired that all portions of the laundry are directly exposed to steam (0037). A skilled artisan would have known that by directly exposing all portions of the laundry to steam for a predetermined amount of time, the laundry would be soaked.

17. YANG teaches the drum being rotated at a high speed, but remains silent as to the drum being rotated at a speed higher than 2000 RPM. However, a speed of rotation is result effective because it affects the distribution of laundry in the drum and the amount of energy being used by the operation of the laundry device. Since applicants did not provide any criticality regarding the recited parameter, one skilled in the art would have found obvious to optimize the rotational speed of the drum through routine experimentation for optimum cleaning result, consult In re Boesch and Slaney 205 USPQ 215 (CCPA 1980) and (MPEP 2144.05 II).

18. The teachings of YANG do not explicitly state that the steam soaked contaminants would be centrifugally separated from the laundry. However, since YANG teaches rotating the drum with laundry at a high speed, a skilled artisan would have known that centripetal acceleration would cause the contents of the drum to separate according to density. One with ordinary skill in the art would know that the contaminates would have a different density than the laundry, therefore making it inherent that the contaminates would centrifugally separate from the laundry during high speed rotations.

19. With regard to claim 11, YANG teaches the method according to claim 10 but does not explicitly teach the temperature of the supplied steam being higher

temperature than the laundry may be sterilized. However, one of ordinary skill in the art would have known that YANG would be supplying the steam into a drum with a lower temperature than the steam, therefore the steam would loose energy and heat by the time it contacted the laundry. The steam would have to be supplied at a higher temperature than the desired temperature of the laundry to achieve effective cleaning. One with ordinary skill in the art at the time the invention was made would have known to use a higher temperature steam at the exit to achieve the desired cleaning temperature in the laundry device.

20. With regard to claim 13, YANG teaches the method according to claim 10. YANG teaches the drum being rotated at a high speed, but remains silent as to the drum being rotated at a speed between 2000~4000RPM. However, a speed of rotation is result effective because it affects the distribution of laundry in the drum and the amount of energy being used by the operation of the laundry device. Since applicants did not provide any criticality regarding the recited parameter, one skilled in the art would have found obvious to optimize the rotational speed of the drum through routine experimentation for optimum cleaning result, consult In re Boesch and Slaney 205 USPQ 215 (CCPA 1980) and (MPEP 2144.05 II).

21. With regard to claim 14, YANG teaches the method according to claim 10. Furthermore, YANG teaches rotating the drum at a lower speed than the rotation speed to discharge steam in the drum (0037).

22. With regard to claim 15, YANG teaches the method according to claim 14. YANG teaches the drum being rotated at a low speed, but remains silent as to the drum

rotating at a speed lower than 100RPM. However, a speed of rotation is result effective because it affects the distribution of laundry in the drum and the amount of energy being used by the operation of the laundry device. Since applicants did not provide any criticality regarding the recited parameter, one skilled in the art would have found obvious to optimize the rotational speed of the drum through routine experimentation for optimum cleaning result, consult In re Boesch and Slaney 205 USPQ 215 (CCPA 1980) and (MPEP 2144.05 II).

23. With regard to claim 16, YANG teaches the method according to claim 14. YANG remains silent as to the time for discharging the steam being shorter than the time for rotating the drum. However, the rotation and steam discharge times are result effective because they affect the amount of washing fluid and detergent concentration in the washing period. Therefore, a skilled artisan would have found it obvious to optimize the step times of the control method through routine experimentation for optimal cleaning times and dirt removal.

24. With regard to claim 19, YANG teaches the method according to claim 10. Furthermore, YANG teaches spraying fluid detergent to the laundry before supplying steam (0026).

25. With regard to claim 22, YANG teaches the method according to claim 10. YANG teaches the drum being rotated at a low speed, but remains silent as to the drum rotating at a speed lower than 100RPM. However, a speed of rotation is result effective because it affects the distribution of laundry in the drum and the amount of energy being used by the operation of the laundry device. Since applicants did not provide any

criticality regarding the recited parameter, one skilled in the art would have found obvious to optimize the rotational speed of the drum through routine experimentation for optimum cleaning result, consult In re Boesch and Slaney 205 USPQ 215 (CCPA 1980) and (MPEP 2144.05 II).

26. With regard to claims 30 and 31, YANG teaches the method according to claim 10. Furthermore YANG teaches the washing of laundry with washing water comprising: performing a washing cycle (0034), performing at least one rinsing cycle (0034), performing a final spinning cycle (0034), and performing a dry cycle (0034). YANG remains silent as to the drum being rotated at a speed between 600RPM to 2000RPM during the final spinning cycle (spin dry cycle) and between 3000-4000 RPM during the dry cycle. However, a speed of rotation is result effective because it affects the distribution of laundry in the drum and the amount of energy being used by the operation of the laundry device. Since applicants did not provide any criticality regarding the recited parameter, one skilled in the art would have found obvious to optimize the rotational speed of the drum through routine experimentation for optimum cleaning result, consult In re Boesch and Slaney 205 USPQ 215 (CCPA 1980) and (MPEP 2144.05 II).

27. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPGPub 20050132503 to YANG ET AL as applied to claim 10 above, and further in view of USPGPub 20040187527 to KIM ET AL.

28. With regard to claim 12, YANG teaches the method according to claim 10 but remains silent as to the laundry being fully soaked by the steam. However, it is known

in the art to supply steam into a laundry device to soak the laundry, as taught by KIM (0062). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method taught by YANG to let the laundry being fully soaked, as taught by KIM, to allow for the laundry to reach the desired cleaning effect.

29. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPGPub 20050132503 to YANG ET AL in view of USPGPub 20010049847 to YARMOSKY.

30. With regard to claim 20, YANG teaches the method according to claim 19. YANG teaches the spraying of fluid detergent but does not teach the detergent being supplied as concentrated detergent. However, it is known in the art to use concentrated detergents as taught by YARMOSKY (0012). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method taught by YANG to have concentrated detergent as suggested by YARMOSKY to be more environmentally friendly since concentrated detergents have reduced shipping costs.

31. ***Response to Arguments***

32. Applicant's arguments with respect to claims 10-16, 19, 20, 30 and 31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATELYN B. WHATLEY whose telephone number is (571)270-5545. The examiner can normally be reached on Monday-Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATELYN B WHATLEY/
Examiner, Art Unit 1714
/Michael Kornakov/
Supervisory Patent Examiner, Art Unit 1714